

ABSTRACTS

This section of the JOURNAL is published in collaboration with the two abstracting Journals, ABSTRACTS OF WORLD MEDICINE and OPHTHALMIC LITERATURE, published by the British Medical Association. The abstracts are divided into the following sections: Syphilis (Clinical, Therapy, Serology, Pathology, Experimental), Gonorrhoea, Non-Gonococcal Urethritis and Allied Conditions, Chemotherapy, Public Health and Social Aspects, Miscellaneous. After each subsection of abstracts follows a list of articles that have been noted but not abstracted. All subsections will not necessarily be represented in each issue.

SYPHILIS (Clinical)

Congenital Syphilis in the Absence of Demonstrable Infection of the Parents. (Angeborene Syphilis bei nicht nachweisbarer Syphilis der Eltern.) FRÜHWALD, R. (1954). *Z. Haut- u. GeschlKr.*, **17**, 345.

The author reports from the Municipal Skin Clinic, Zwickau, Germany, the case of a woman in whom the Wassermann reaction was negative during pregnancy and who showed no signs of acquired or congenital syphilis, and yet gave birth to an infant who developed a syphilitic rash at the age of one month and died a few days later. *Post-mortem* examination of the child showed the presence of syphilitic interstitial hepatitis and myocarditis. The mother had had two previous pregnancies during both of which serological tests were negative, but on each occasion the infant died shortly after birth without a certain diagnosis having been reached.

The father had submitted to serological and clinical examination for syphilis after the death of his first child, with entirely negative results. The tests were repeated on both parents after the death of the third child and gave doubtfully positive results in each case. Complete clinical examination, including testing of the cerebro-spinal fluid, was negative for syphilis, and the mildly positive serological test results reverted to negative within 3 months [but it is not made clear whether this was in response to the antisyphilitic treatment which was given to both parents some time after the death of the third child]. It is concluded that after any neonatal death for which no good reason can be found, the possibility of syphilis in the mother has to be kept in mind. [This was clearly done in the case of this patient, but without success. It seems that a case could be made out for the use of the treponemal immobilization test in such circumstances. At any rate, if the slightest suspicion of maternal syphilis is still entertained, a prophylactic course of penicillin appears to be justified.]

G. W. Csonka

Avoidable Congenital Syphilis. (Über vermeidbare connatale Lues.) BROCK, J., and GRUNER, E. H. (1955). *Ärztl. Wschr.*, **10**, 185. 4 refs.

The incidence of prenatal and congenital syphilis is declining in Germany as in many other countries, and the authors are of the opinion that it might be possible,

by means of a programme of prenatal prophylaxis, to eradicate congenital syphilis completely. For this purpose they recommend that in addition to the routine blood testing of pregnant women, examination of the retroplacental blood should be carried out, false positive reactions being excluded with the treponemal immobilization test. All pregnant women who have previously been treated for syphilis should receive two courses of penicillin during pregnancy, since their syphilis may become reactivated, while babies born of untreated syphilitic mothers should receive immediate preventive treatment with penicillin, even in the absence of clinical or serological evidence of infection. (It is pointed out that in Germany, under a law passed in 1953, a pregnant woman must undergo such treatment as may be considered necessary to safeguard the baby against infection, while it is the duty of the parents to ensure that the baby receives any treatment recommended by the physician.)

The case histories of four babies admitted during the period 1949–51 to the Rothenburg District Children's Hospital, Hamburg, with congenital syphilis are quoted. In each case the child was apparently normal at birth but developed signs of syphilis and with positive serum reactions 3 to 10 weeks later.

[There are serious objections to the replacement of clinical and serological observation of apparently healthy babies born of syphilitic mothers by "preventive treatment". Amongst other dangers, the possibility exists that a child treated in this way may be stigmatized for ever as having had congenital syphilis. The case histories are not at all convincing as evidence of the need for such a policy, because neither the mothers nor the babies had had adequate serological surveillance. For example, only one of the mothers had had her blood tested during pregnancy, and in three cases the baby's blood was not tested until syphilis became clinically apparent.]

A. Fessler

Late Congenital Syphilis of the Inner Ear—a Sequel of Chronic Osteomyelitis of the Petrous Bone. (Die Lues hereditaria tarda des Innenohres—eine Folge chronischer Osteomyelitis des Felsenbeins.) NAGER, F. R. (1955). *Pract. oto-rhino-laryng. (Basel)*, **17**, 1. 8 figs, 24 refs.

In cases of late congenital syphilis chronic middle-ear disease is a common occurrence. Deafness, resulting from changes in the perceptive apparatus, may occur

secondarily as a consequence of spread from the middle ear (tympagogenic). A sero-fibrinous labyrinthitis or a syphilitic osteomyelitis may be produced.

In this paper from the University Ear Clinic, Zürich, the author reviews a number of such cases reported in the literature, especially with regard to the histological findings, and adds two cases of his own in which progressive deafness of inner-ear type was noticed and in which the petrous bones were subsequently examined microscopically *post mortem*. In one case, in which death was due to miliary tuberculosis, the middle ear was quite normal and the main changes were those of a labyrinthitis. In the second the changes were characteristic of a syphilitic osteitis with chronic inflammatory changes in the middle ear which, however, had not affected the bone directly. In this case an otosclerotic focus was noticed on one side. It is suggested that the bone changes may, in some of these cases, be the result of a haematogenous spread, and it is considered that the histological pictures in the two cases described represented two different stages in the same disease process.

G. E. Stein

Late Congenital Neurosyphilis. (General Paresis and Tabes.) (Neurosifilis congénita tardia. Parálisis general juvenil—Tabes juvenil.) ARNDT, M., and THOMSON, A. F. (1954). *Acta neuropsychiat. argent.*, 1, 3. 7 figs, bibl.

An account is given of twenty cases of late congenital parenchymatous neurosyphilis (sixteen of general paresis and four of tabes dorsalis) seen between 1940 and 1954 at the Buenos Aires Institute of Neurological Research. In only twelve cases was it possible to diagnose syphilis in the parents, only three of whom themselves showed signs of neurosyphilis.

The sixteen congenital cases constituted 1·8 per cent. of a total of 877 cases of general paresis seen during this period. The psychiatric picture was of dementia which either started at a very early age as a generalized mental deficiency or developed during late childhood (average age 13·9) in an apparently normal child. In the latter group a catatonic or depressive picture was observed at the onset. Pupillary abnormalities were present in all cases, inequality and abnormal responses to light being the most frequent. Speech disturbances were present in all but one patient, speech being slow, monotonous, and slurred in the initial stages, then gradually becoming explosive, repetitive, and more and more inarticulate and unintelligible until mutism finally developed. An intense or partial optic atrophy was found in nine cases. Tremor of the hands and tongue was present and was similar to that of the acquired form. Hyperactivity and motor restlessness were common. The tendon reflexes were reduced in five cases and increased in nine, an extensor plantar response being present in one case only. Fits occurred in six cases, one patient having up to twenty daily. The cerebrospinal fluid showed changes which did not differ from those found in adult paretics. On the whole these juvenile cases responded very poorly to malaria and penicillin.

The four cases of tabes are also described in detail. The onset was at puberty, except in one case in which it was delayed until the age of 34. The clinical picture differed in no way from that of the acquired form.

Richard de Alarcón

Cardiovascular System Syphilis. JOHNSON, S. A. M., JANSEN, G. T., and SHAPIRO, H. H. (1954). *Arch. Derm. Syph. (Chicago)*, 70, 799. 16 refs.

A short report is presented from the University of Wisconsin Medical School on the survival and the clinical and serological changes observed among nineteen patients who were treated for cardiovascular syphilis with 4,008,000 units aqueous benzylpenicillin 5 or more years ago. The prognostic value of various clinical tests is also discussed.

Of the ten patients who had died, five had been suffering from aortic aneurysm, the average survival period being 53 months after the onset of symptoms and 23·5 months after completion of treatment; the corresponding average survival periods for four patients with aortic insufficiency were 74 months and 22 months respectively, while the tenth patient, who was suffering from both aortic aneurysm and aortic insufficiency, survived for 74 months after the onset of symptoms and 44 months after treatment. Of the nine surviving patients, two needed another course of penicillin, one on account of accompanying neurosyphilis and the other because the condition of his heart had deteriorated. Of the eleven patients whose cerebrospinal fluid had shown pathological changes, six were still alive, and in only three of them had the fluid shown signs of improvement.

It is concluded from this series that radiological and electrocardiographic indications of left ventricular hypertrophy are prognostically not unfavourable in cases of cardiovascular syphilis, nor does the presence of severe hypertension appear to shorten the survival period. Of all the available tests of cardiac function, only the orthodiagram and the functional capacity test are considered to be of prognostic value in this condition. The authors also conclude that the results of treatment of cardiovascular syphilis with penicillin are no better than those obtained with arsenic and heavy metals, and that doses up to 10 mega units should probably be given.

[It is to be doubted whether such far-reaching conclusions can be drawn from observations on so small a series.]

A. Fessler

Relationship between Clinical and Electroencephalographic Findings in General Paresis. (Correlaciones clínico-electroencefalográficas en la parálisis general progresiva.) MOSOVICH, A., and WEICKHARDT, G. (1954). *Acta neuropsychiat. argent.*, 1, 43. 5 figs, 15 refs.

A comparative study of the electroencephalographic and clinical features of twenty cases of dementia paralytica was made at St. Elizabeth's Hospital, Washington, D.C. The patients ranged in age from 28 to 58. None suffered from epileptic fits, and the diagnosis was fully confirmed by neurological and laboratory findings. The time of the primary infection was unknown in most cases. Six patients showed progressive dementia, eleven

a megalomaniac picture, two depressive features, and two anxiety and homicidal tendencies.

The electroencephalograms (EEGs) before treatment were classified as follows: four normal, four "slightly abnormal", seven "moderately abnormal", and five "frankly abnormal". Of the patients in the last two groups, five showed predominant slow frontal activity and two mixed frontal delta and fast rhythms. In twelve cases there was an abnormal response to hyperventilation, with generalized paroxysmal phenomena and greater slowing in the frontal leads. The most common abnormalities were frontal slow activity and cortical instability revealed by a dysrhythmic response to hyperventilation. No correlation was found between the EEG and the neurological and psychiatric picture. A slight improvement in the EEG was observed in some cases after treatment, but it was not significant or conclusive. There was, however, a correlation between the initial EEG and the response to treatment, patients with a normal or near normal initial record responding much better to penicillin and malaria. *Richard de Alarcón*

Diagnostic Evaluation of Serological Estimation in Eye Diseases. 1. **Aetiological Significance of Syphilis, Gonorrhoea, and Tuberculosis.** (Diagnostische Bewertung serologischer Untersuchungsergebnisse bei Augenkrankheiten. 1. Ätiologische Bedeutung der Lues, Gonorrhoe, Tuberkulose.) SIEGERT, P. (1955). *Klin. Mbl. Augenheilk.*, 126, 257. 7 tables, 1 fig.

This is the first part of a study of considerable interest which leads the author to conclude that exudative granulomatous ocular inflammations constitute a non-specific tissue reaction which is not necessarily related to specific bacterial infections.

Positive titres alone indicate the presence of a generalized infection, but do not prove that ocular manifestations are the specific manifestations of such an infection. Negative findings on the other hand do not exclude it. In tuberculosis a high titre is slightly more reliable with regard to the aetiological inference of ocular manifestations. *L. Cudkowicz*

The Differential Diagnosis of Tertiary Syphilis in the Eye. (Zur Differentialdiagnose der Lues III am Auge.) KLEMENS, F., and LÜDERS, C. J. (1955). *Klin. Mbl. Augenheilk.*, 126, 279. 9 figs, 18 refs.

Two cases of tertiary syphilis affecting the lids and orbits are reported which were of considerable diagnostic difficulty. In the presence of a negative serology, biopsy is of some use in differentiating, on histological grounds, granulomatous lesions from those resembling tuberculomata. *L. Cudkowicz*

False Form of Syphilitic Interstitial Keratitis. (Forme trompeuse de kératite interstitielle syphilitique.) FRANÇOIS, P., and LESAGE, C.-H. (1954). *Bull. Soc. Ophthal. Fr.*, p. 633.

Oedematous infiltration of the cornea without precipitates was followed by a crisis of acute glaucoma. Iridencleisis was performed and some days later the interstitial keratitis appeared. *J. Rougier*

Nelson Reaction in the Diagnosis of Chorio-Retinitis. (L'intérêt de la réaction de Nelson dans le diagnostic des chorio-rétinites.) VOISIN, J., and VILLETTE, P. (1954). *Bull. Soc. Ophthal. Fr.*, p. 491.

Seven cases of chorio-retinitis are reported. The Nelson test is useful in establishing the aetiology, as syphilis can be eliminated when the Nelson test is negative. *J. Rougier*

Nelson's Test in Ophthalmology. (L'intrêt du test de Nelson en ophtalmologie.) FRANÇOIS, P., and BEAL, F. (1954). *Bull. Soc. Ophthal. Fr.*, p. 639.

In a case of irido-keratitis, and in one of retrobulbar neuritis, the positivity of Nelson's test has enabled the aetiology to be established, and effective treatment to be initiated. *J. Rougier*

Congenital Syphilis. A Follow-up Study with Reference to Mental Abnormalities. [In English.] HALLGREN, B., and HOLLSTRÖM, E. (1954). *Acta psychiat. neurol. scand.*, Suppl. 93, 1. Bibl.

Syphilis. TILLEY, R. F. (1955). *New Engl. J. Med.*, 252, 308. 35 refs.

Syphilis. Review of the Recent Literature. BEERMAN, H., SCHAMBERG, I. L., NICHOLAS, L., and KATZENSTEIN, L. (1955). *Arch. intern. Med.*, 95, 256. Bibl.

SYPHILIS (Therapy)

Fundamentals of Penicillin Therapy in Syphilis. (Las bases de la penicilino-terapia en la sífilis.) GUTHE, T. (1954). *Act. dermo-sifiligr. (Madr.)*, 46, 159. 3 figs, bibl.

The author, who is head of the Section for Venereal Diseases and Treponematoses of the World Health Organization (WHO), outlines the fundamentals of the treatment of syphilis by modern methods. A 6-year follow-up study of the results obtained in the treatment of secondary syphilis with penicillin alone and with penicillin in combination with arsenic and bismuth has shown that no additional benefit results from the addition of metal therapy. Moreover, penicillin is also safer, easier to administer, and much cheaper. In the author's experience the Herxheimer reaction is not to be feared except sometimes in the treatment of the newborn. The new long-acting penicillins now available make possible the adequate treatment of syphilis in one or at the most a few injections, whereas because of the prolonged course necessary with arsenic and bismuth only some 10 per cent. of patients completed treatment. A world survey carried out by WHO showed that some 63 per cent. of venereologists use penicillin alone in the treatment of syphilis.

The author goes on to stress the importance of the time factor in treatment with penicillin, pointing out that the blood concentration of the antibiotic should never be allowed to remain for long below treponemocidal levels during treatment. The time required by the treponeme for multiplication is about 30 hrs, so that the period during which the blood level is below 0.03 unit penicillin

per ml. serum should not last longer than 24 hrs. In sero-negative cases of primary syphilis as little as 4 days' treatment with penicillin may suffice, and the results of therapy are not improved by prolonging it for more than 14 days, nor by inducing high blood concentrations of the drug. A test dose of 300,000 units of PAM, as recommended by WHO, should produce a level of 0.03 unit penicillin per ml. serum, for a period of 72 hrs. The following dosage schemes are suggested:

- (1) 300,000 or 600,000 units PAM given daily or on alternate days to the total dosage required;
- (2) injections of 1.2 or 2.4 mega units PAM at longer intervals corresponding to the size of the dose;
- (3) a single injection of between 4.8 and 6 mega units PAM.

The use of abortive and prophylactic treatment with penicillin is discussed and is recommended for the consorts of patients with infectious syphilis and for the contacts of cases of endemic syphilis and yaws. In conclusion the author points out the danger of producing resistance to penicillin by giving the drug by mouth or parenterally in comparatively small doses for trifling infections. Up to the present, however, there has been no evidence that treponemes are becoming resistant to penicillin.

Eric Dunlop

Studies on the Prophylactic Effect of Locally Applied Antibiotics in Experimental Syphilis. AAVIK, O. R. (1954). *J. invest. Derm.*, 23, 497. 3 refs.

Working at the University of Chicago, the author carried out a series of experiments on adult male rabbits to determine the potential prophylactic value of certain antibiotic ointments applied locally against syphilis. After mild local trauma to the prepuce, pledgets of cotton wool soaked in a suspension of the Nichols strain of *Treponema pallidum* were inserted into the preputial sac for 3 hrs, the prophylactic preparation under trial being applied to the infected area immediately afterwards or after an unspecified interval in groups of three or four rabbits, while three control animals were similarly treated with "vaseline" and three were left untreated, all animals being inspected every 2 or 3 days thereafter. This procedure resulted in the development of typical chancres on the prepuce or glans penis in 96 per cent. of control animals in 24 to 63 days, and examination of serum from the lesions by dark-ground microscopy confirmed the diagnosis. The following antibiotics in ointment form were tested: oxytetracycline, aureomycin, erythromycin, penicillin, neomycin, and bacitracin. Calomel ointment, *U.S.P.*, and an antiseptic liquid soap containing hexachlorophene were similarly tested. Only penicillin had a satisfactory prophylactic effect, none of the rabbits treated with this antibiotic developing a chancre, whereas only occasional protection was afforded by some of the other applications.

In discussing these findings, the author admits that his study is of limited value only, and that the prevention of a clinically visible local lesion with penicillin or any other drug does not preclude the possibility of general infection. Moreover, the number of animals used was far too small to allow any valid conclusions to be drawn

concerning even the local protective effect of penicillin, although the lack of such effect with the other preparations was adequately demonstrated. R. S. Morton

Malaria Therapy in Neurosyphilis. (La malarioterapia nei neuroluetici.) CARRESCIA, P. M., and MASDEA, E. (1954). *Riv. Malar.*, 33, 247. 15 refs.

At the Institute of Malariology, Rome, a total of 506 patients, 397 male and 109 female, with neurosyphilis received malaria therapy between 1936 and 1954. The incidence of general paralysis was significantly higher in the males and of congenital syphilis in the females. In both sexes paralytic forms were commoner than tabetic forms, and the highest incidence for males occurred in the fourth decade and for females in the fifth. The time of onset of neurological symptoms varied widely, but in cases of general paralysis they most frequently developed 16 to 20 years after the primary infection; in the case of tabes there was no peak distribution and symptoms appeared from 5 to 50 years after the primary infection. Most of the patients were given malarial treatment within one year of the appearance of neurological symptoms, only active tuberculosis and decompensated heart disease being regarded as contraindications. Of the 506 patients 456 were infected by the injection of 7 or 8 ml. citrated malarial blood intravenously and 50 by the injection of sporozoites. The strains employed were *Plasmodium vivax*, *P. falciparum*, and *P. malariae*.

The incubation period for *P. vivax* was usually less than 5 days when whole blood was given and 23 days when sporozoites were injected. The fever of initial invasion was more commonly seen in cases with the shorter incubation periods, and it never occurred in patients who gave a history of previous malarial infection. In infections with *P. malariae* the peak blood invasion occurred up to the tenth day, and initial fever occurred less frequently than in re-infected patients, whose peak appeared between the eleventh and twentieth days. The corresponding data are also given for *P. falciparum* infections. The total mortality was 4 per cent., fifteen patients dying from benign tertian malaria, one from quartan malaria, and four from malignant tertian malaria; the blood in all these cases was free from parasites at the time of death.

The therapeutic efficacy of quinine, chloroquine, "atebrin" (mepacrine), and "paludrine" (proguanil) is assessed in a Table [but the effects of malaria therapy on the neurosyphilitic condition are dismissed with the statement that "many cases derived notable benefit"].

F. Hillman

Fatal Herxheimer Reactions during Penicillin Treatment for Congenital Syphilis. (Réactions d'Herxheimer mortelles au cours du traitement pénicilliné de syphilis congénitale.) MONNET, P., and PLAUCHU, M. (1955). *Lyon méd.*, 193, 169. 2 figs, 3 refs.

Treatment of Early Syphilis with Terramycin. (Tratamento da sífilis recente pela Terramicina.) SAMPAIO, M., SAMPAIO, A., and FERREIRA, N. (1955). *Trab. Soc. port. Derm. Vener.*, 13, 37. 6 refs.

Therapeutic Principles in the Treatment of Neurosyphilis.
[In English.] HORÁNYI, B. (1954). *Therap. hung.*, 4, 7.

SYPHILIS (Serology)

Quantitative Studies of Ageing Sera in the Wassermann Reaction with Cardiolipin. (Quantitative Auswertung alternder Wa.R.-Sera mittels Cardiolipin.) RUGE, H. (1955). *Z. Hyg. InfektKr.*, 140, 521. 5 refs.

At the University Skin Clinic, Erlangen, 940 samples of syphilitic serum were tested by means of the Wassermann reaction using cardiolipin antigen, and then, after being kept for various periods, were re-tested two or more times at intervals of 4 to over 30 days; sixty samples were examined on four or more occasions, the rest less often. A significant and progressive fall in the titre was observed with the ageing of the sera. Differences of three or more dilutions were more frequent in specimens obtained from patients with active late syphilis. The effect of treatment was also to produce a larger fall in the titre with ageing. The factors responsible for this phenomenon are not known.

[The detailed results are tabulated and do not lend themselves to abstracting.] G. W. Csonka

Behaviour of the Antilipid and Specific Antitreponemal Antibodies after Penicillin Treatment. (Osservazioni sul comportamento degli anticorpi antilipoidale e treponemo-specifico dopo terapia penicillinica.) MONTILLI, G. (1954). *Ann. ital. Derm. Sif.*, 9, 458. 33 refs.

It is known that the adsorption of syphilitic serum with lipid antigen renders the Wassermann reaction negative but does not prevent a positive reaction to treponemal antigen. Adsorption with treponemal antigen, however, renders syphilitic serum inactive to both tests. These facts led the author, working at the University of Naples, to investigate the behaviour of the antilipoid and the antitreponemal antibodies in twenty cases of syphilis after administration of 6 mega units depot penicillin given in doses of 1.2 mega units at 4-day intervals. The technique of antilipoid antibody adsorption, which is described, consists essentially in incubation and agitation of the serum with a kaolin-beef-heart suspension.

In three out of six cases of primary syphilis an initially low titre of antitreponemal antibody disappeared in 24 days after treatment; in the other three cases an initially high titre persisted for 2 to 3 months. In five of the six cases the antilipoid antibody remained unchanged at the end of treatment and disappeared in over 30 days. In nine out of fourteen cases of secondary syphilis the antilipoid antibody disappeared 30 to 35 days after the end of treatment and in the remaining five cases in 60 days, whereas the antitreponemal antibody never disappeared in less than 90 days, and its titre returned nearly to the original level in two cases after an initial fall.

The author found that the higher the initial titre, the more slowly did it disappear. The occurrence of some degree of oscillation of the two titres during penicillin therapy is explained on the hypothesis that the reticulo-histiocytic system has a limited capacity to produce anti-

body. The return of the antitreponemal antibody after a course of 6 mega units penicillin is in contrast to the usual complete disappearance of this antibody after treatment with arsenobenzol and bismuth, and the author suggests therefore that lipid and treponemal antigens should both be used in routine tests as a means of assessing the therapeutic efficacy of the newer antibiotics. F. Hillman

Simple Procedure for the Identification of Non-syphilitic Reactions in Serologic Tests for Syphilis in Leprosy Patients. PORTNOY, J., and EDMUNDSON, W. F. (1954). *Int. J. Leprosy*, 22, 181. 31 refs.

Studies at the Venereal Disease Research Laboratory of the U.S. Public Health Service have shown that the addition of choline chloride to the antigen used in the VDRL slide test for syphilis tends to raise its reactivity with syphilitic sera while reducing its reactivity with sera giving non-specific reactions. A differential test is described in which VDRL antigen is prepared and divided into equal portions; these are centrifuged at 2,500 r.p.m. for 15 min., the turbid supernatants discarded, and the walls of the tubes wiped dry. To one tube normal saline is added (Antigen I) and to the other 10 per cent. choline chloride (Antigen II), each in an amount equal to the volume of antigen originally centrifuged. Using these two antigens, slide flocculation tests are carried out as in the original VDRL technique, the results being read microscopically at a magnification of $\times 100$ and the degree of flocculation with each antigen being assessed on a numerical scale reading from 0 (no clumping or very small clumps) to 4 (large clumps). Where necessary, quantitative tests on serial twofold dilutions of serum in saline starting at 1 in 2 are made and the result for each antigen expressed as the sum of the flocculation values obtained at the various dilutions. Where flocculation occurs only with Antigen I, or where the difference between the results with the two antigens is 3 or more, the reaction is regarded as non-syphilitic; where the difference is 2 or less the reaction is regarded as syphilitic; and where flocculation occurs with neither the serum is regarded as non-reactive.

There was good agreement between the results of this differential procedure and those of the treponemal immobilization (TPI) test on sera from 84 presumed non-syphilitic patients, 87 with early syphilis, and 54 with late or late latent syphilis. Sera from 255 lepers were also studied; fourteen of these were from patients with clinical or historical evidence of syphilis, six of whom gave the syphilitic reaction in the differential test and positive or doubtful reactions in the TPI test, five were non-reactive in the differential test and four gave negative and one doubtful reaction in the TPI test, three gave non-syphilitic reactions in the differential test, two being TPI-positive and one TPI-negative. Of the 241 sera from lepers with no evidence of syphilis, 21 were found to be TPI-positive; fifteen of these gave syphilitic and three non-syphilitic reactions, and three were non-reactive with the differential test. Of the remaining 220 sera, which were all TPI-negative, 153 were non-reactive and 67 gave the non-syphilitic type of reaction.

Substitution of sodium chloride for choline chloride in equimolar quantities gave an essentially similar degree of inhibition of the reactivity of sera giving non-specific reactions, but the "coarseness" of the negative reaction made the interpretation of results difficult.

A. E. Wilkinson

Value of the Quantitative Complement-fixation Test for Syphilis in Leprosy. ALMEIDA, J. O. DE, SOUZA LIMA, L., and CARVALHO, R. P. S. (1955). *Amer. J. trop. Med. Hyg.*, 4, 41. 17 refs.

At the University Faculty of Medicine, São Paulo, Brazil, complement-fixation tests for syphilis, employing a quantitative technique with cardiolipin and antigens from an extract of tubercle bacilli, were performed on samples of serum from 467 patients with treated and untreated lepromatous leprosy after the patients had undergone clinical examination in order to exclude tuberculosis.

With the cardiolipin test there was a reaction in 28 cases (6 per cent.) and no reaction in the remainder. With the antigens from tubercle bacilli there was a reaction in 413 cases (88.4 per cent.) and no reaction in 54 (11.6 per cent.). Blood samples from 133 of the 439 leprosy patients who gave negative results in the cardiolipin test were also tested by other techniques for the sero-diagnosis of syphilis. Of these, 65 per cent. gave positive reactions with the Kahn standard test, 36 per cent. with the VDRL test, and 12.5 per cent. with the Kolmer antigen test.

The patients who gave positive reactions in the quantitative cardiolipin test were treated with penicillin as well as sulphones for their leprosy. The subsequent serological pattern in these cases was that of non-leprosy syphilitic patients. It is concluded that the quantitative cardiolipin test is a reliable criterion of syphilitic infection even in individuals with concurrent leprosy.

R. R. Willcox

Intradermal Reaction to Treponemal Protein Antigen in Syphilis. (La intradermoreazione con antigene treponemico proteico nei luetici.) MARAGNANI, U. (1955). *Minerva dermat. (Torino)*, 30, 16. 43 refs.

The intradermal reaction to treponemal protein antigen depends both on individual factors in the patient and on certain factors inherent in the antigen used, such as the mode of preparation and the strain of treponema. Figures quoted from the highly controversial literature show that positive reactions have been obtained in 0 to 25 per cent. of cases of primary and secondary syphilis, in 70 to 100 per cent. of tertiary syphilis, and in 30 to 100 per cent. of congenital cases, suggesting that the test is not diagnostic at any stage of the disease.

Using Reiter's treponema, the antigenic structure of which is discussed, the author, working at the Civil Hospital, Alessandria, has given 0.1 ml. of a 1-in-100 dilution of protein from this treponema by intracutaneous injection to 110 syphilitic patients and a number of control subjects. A strong positive response was obtained in only three cases of late latent syphilis, in one of general paresis, and one of congenital syphilis; weak reactions were obtained in another eight cases and

doubtful reactions in thirteen. No reaction was noted in the remaining 84 cases or in the controls. All five patients giving a strong positive reaction also reacted to another non-specific skin test, and one of the patients reacted very strongly to all of four non-specific skin tests. Attempts to produce passive transfer of allergy by injecting serum from reacting patients together with antigen into weak reactors gave inconclusive results, and injection of blister fluid from these patients mixed with antigen gave negative results. Antihistaminic drugs did not influence the results, but hyaluronidase was found to diminish the response by shortening the time of contact between antigen and antibody. Titration of the antigen in an attempt to construct an allergometric curve was unsuccessful, since further dilution rendered the results doubtful.

The author suggests that variation in results between different series may be due to differences in interpretation or in the antigen preparation employed. Reiter's treponema gives a lipid, a thermolabile protein, and a heat-stable polysaccharide antigen, and the last-named might be more suitable for skin tests. On the whole the author considers that his poor results were mainly due to the nature of the antigen used.

F. Hillman

The Serum Protein Picture in Syphilis. (Il quadro sieroproteico nella sifilide.) POZZO, G., and HOFMANN, M. F. (1954). *G. ital. Derm. Sif.*, 95, 569. 6 figs, 37 refs.

This discussion of changes in the serum protein picture in syphilis is presented from the Dermatological Clinic, University of Milan. The authors consider that there occurs in syphilis a disturbance of the globulino-poietic mesenchyme, and that the results of a whole group of reactions (the *Reaktions-Konstellationen* of Wuhrmann and Wunderly) should be considered in relation to the stage of the disease. The following tests were carried out on 32 patients in all stages of syphilitic infection and on ten with non-specific reactions: determination of total serum protein content biochemically and by paper electrophoresis, analysis of euglobulins (the Boselli reaction), and the colloidal tests of MacLagan and Kunkel.

Briefly, they showed that in three sero-negative cases of primary syphilis the serum protein pattern and the colloid state were normal. In three sero-positive cases of primary syphilis and four of secondary syphilis there was a mild decrease in albumin content with an increase in α - and γ -globulins and a disturbance in the flocculation reactions. In ten sero-positive cases of latent or cured syphilis there was a very slight increase in the α -euglobulin and γ -pseudoglobulin values, while a number of cases of "cured" congenital and acquired syphilis showed normal values. Lastly, six cases in which a Herxheimer reaction occurred were analysed. In one of these patients, who was sero-negative and had a chancre, a normal serum protein picture was present; the others showed mild irregularities within the margin of error of the method.

The problem of the biological false positive Wassermann reaction is considered in detail. The authors suggest that it may be due to:

- (1) an antibody, such as occurs in yaws or bejel ;
- (2) some alteration in the serum globulins ;
- (3) a change in the chemical constituents of the blood [but this last group is not further considered].

In support of the first they cite ten cases of leprosy showing a marked increase in the γ -globulin (mainly euglobulin) value and intensely positive flocculation reactions ; in other cases, not associated with any special disease, there may be a mild hypo-albuminaemia with increase of α_2 -euglobulin or pseudoglobulin value, and also an increase in γ -euglobulin content. It is suggested that the last-mentioned is of value in differentiating between biological false positive results and those in cases of latent or congenital syphilis. *F. Hillman*

Cardiolipin Antigen. Nephelometric Measurements. 1. HARTMANN, J. (1955). *Acta path. microbiol. scand.*, **36**, 82. 4 figs, 3 refs.

Cardiolipin Antigen. Nephelometric Measurements. 2. [In English.] HARTMANN, J., and REYN, A. (1955). *Acta path. microbiol. scand.*, **36**, 129. 4 figs, 6 refs.

Cardiolipin Antigen. VI. Examination of an Incomplete Cardiolipin Antigen. 1. VII. Examination of an Incomplete Cardiolipin Antigen. 2. [In English.] SCHMIDT, H. (1955). *Acta path. microbiol. scand.*, **36**, 141. 9 figs, 16 refs.

Cardiolipin Microflocculation Reaction for Syphilis on Sera from Patients with Pulmonary Tuberculosis. (La reazione di microflocculazione alla cardiolipina per la sifilide sui sieri di malati di tubercolosi polmonare.) MONACO, A. (1954). *G. Med. Tisiol.*, **3**, 35. 11 refs.

Recent Advances in the Serology of Syphilis. (Neuere ergebnisse auf dem Gebiet der Syphilis-Serologie.) WORTMANN, F. (1955). *Praxis*, **44**, 260.

Serological Testing for Syphilis in Minnesota. A Recommendation for a More Productive Use of Routine Testing. KIMBALL, A. C., BAUER, H., and BARR, R. N. (1955). *Minn. Med.*, **38**, 98. 5 refs.

Serological Detection of the Treponematoses in African Communities. (Comment concevoir le s ro-d pistage des tr pon matoses au sein des collectivit s africaines.) LAPEYSSONNIE, L. (1955). *Acta trop. (Basel)*, **12**, 29. 1 fig., 44 refs.

Experimental Production of Non-specific Positive Serological Reactions for Syphilis by Colloid Chemical Means. (Ein experimenteller Beitrag zur Erzeugung unspezifische-positiver Reaktionen in der Luesserologie auf kolloid-chemischen Wege.) M BEST, H. (1955). *Zbl. Bakt., I. Abt. Orig.*, **162**, 313. 7 figs, 12 refs.

Acetone-soluble and Alcohol-soluble Fractions of "Phencer" in the Sero-diagnosis of Syphilis. (Il fencor-acetosol e il fencor-alcoolol nella sierodiagnosi della sifilide.) PERRIA, M. (1955). *Igiene mod.*, **48**, 66. 4 refs.

Biological Diagnosis of Syphilis by Examination of the Saliva. A Medico-legal Study. (Le diagnostic biologique de la syphilis par l'examen de la salive. Etude m dico-l gale.) L' P E, P., PAUTRIZEL, -, LAZARINI, -, and SANANES, -. (1955). *Ann. Med. l g.*, **35**, 18.

Studies of the Non-specific Wassermann Antibodies in Ornithosis. (Untersuchungen  ber den unspezifischen Wassermann-Antik rper bei Ornithose.) BRAND, G., and LIPPELT, H. (1955). *Arch. ges. Virusforsch.*, **6**, 65. 1 fig., 7 refs.

Microflocculation [VDRL] Test with Cardiolipin Antigen for the Diagnosis of Syphilis. (La microreazione di flocculazione con antigene cardiolipinico per la diagnosi della sifilide.) MONTILLI, G., and PISANI, M. (1955). *Progr. med. (Napoli)*, **11**, 68. 5 refs.

Value of the VDRL Slide Flocculation Test in the Diagnosis of Syphilis. CHACKO, C. W., RAJAM, R. V., KRISHNAMURTHI, N., and GOPALAN, K. N. (1955). *Indian J. med. Sci.*, **9**, 69. 1 fig., 16 refs.

SYPHILIS (Pathology)

Untreated Syphilis in the Male Negro. Pathologic Findings in Syphilitic and Non-syphilitic Patients. PETERS, J. J., PEERS, J. H., OLANSKY, S., CUTLER, J. C., and GLEESON, G. A. (1955). *J. chron. Dis.*, **1**, 127. 11 refs.

This is a further report of the results of the "Tuskegee Study" of untreated syphilis in the male negro which has been in progress since 1932 under the Venereal Disease Program of the U.S. Public Health Service at Tuskegee, Alabama. The *post-mortem* findings in a controlled group of untreated syphilitic and non-syphilitic subjects are here correlated with the serological and clinical findings. Between 1933 and 1952, 165 (40 per cent.) of the 408 untreated syphilitics and 51 (27 per cent.) of the 192 comparable control subjects studied have died, necropsy being carried out on 92 (56 per cent.) of the former and 33 (65 per cent.) of the latter. The age distribution in these last two groups was similar, approximately half of each being under and half over 65 at death.

Lesions characteristic of syphilitic involvement of the cardiovascular system were found in 89 of the 92 syphilitic subjects. Gross examination revealed syphilitic aortitis in 36 cases (40 per cent.), the most reliable and most highly pathognomonic signs being linear striation of the intima (32.6 per cent.) and saccular aneurysm (7.9 per cent.). Microscopically, only marked thickening of the aortic wall and necrosis of the media appeared to be pathognomonic of syphilis. Syphilitic aortitis was diagnosed microscopically in 41 (46 per cent.) of the syphilitic subjects, while in 4 (12.5 per cent.) of the control subjects minimal damage, conceivably due to syphilis, was present. Cardiac hypertrophy (heart weight over 400 g.) was present in 69.5 per cent. of the syphilitic group and 69.2 per cent. of the control group, and with the exception of syphilitic valvulitis (which was present in less than 10 per cent. of the former) no abnormality

of sufficient specificity was found to justify a diagnosis of cardiac hypertrophy due to syphilis. Of the 89 syphilitics with cardiovascular lesions, the Kahn test was positive at the time of death in sixty. Aortitis was diagnosed in 37 (62 per cent.) of these cases, but in fourteen of them the diagnosis was based on either gross or microscopic findings alone and might be considered doubtful. The minimum incidence of aortitis in this group was therefore 38 per cent. Among the syphilitics in whom the Kahn reaction was negative or doubtful at death, aortitis was diagnosed by both gross and microscopical examination in only two cases.

From these findings the authors estimate that in the male negro with untreated syphilis of more than 10 years' duration and who is sero-positive at death, the likelihood of syphilitic cardiovascular involvement being demonstrable at necropsy is approximately 50 per cent. Among the 62 cases in which the gross and microscopical findings in the aorta were in agreement there were only two cases in which syphilitic involvement was present but had not been diagnosed clinically, whereas in nineteen cases a clinical diagnosis of syphilitic aortitis was not confirmed post mortem. No definite light was thrown by this study on the relation between syphilis and arteriosclerosis.

The central nervous system was examined *post mortem* in 46 of the syphilitic group and definite evidence of syphilis was found in only two cases, both in association with syphilitic aortitis. The authors remark that "the great scarcity of frank syphilitic involvement of the central nervous system and the complete absence of lesser lesions attributable to syphilis are noteworthy".

No significant differences between the syphilitic and control groups were found in respect of lesions in the other systems of the body, which, it would seem, are not commonly affected by syphilis. The primary cause of death in 18 of the 92 syphilitics on whom necropsy was performed was syphilitic involvement of the cardiovascular or central nervous systems; otherwise the distribution of causes of death in both groups was similar.

[The Tuskegee Study is unique, and further reports may be expected throughout the further period of 20 years which, it is anticipated, will be required for its completion.]
Leslie Watt

Studies on the Destruction of Red Blood Cells in Paroxysmal Cold Haemoglobinuria of the Donath-Landsteiner (Syphilitic) Type. [In English.] JORDAN, F. L. J., and SCHLESINGER, F. G. (1955). *Acta med. scand.*, **151**, 107. 5 figs, 9 refs.

Decline in Mortality from Syphilis in Minnesota. BELL, E. T. (1955). *Arch. Path. (Chicago)*, **59**, 259. 6 refs.

SYPHILIS (Experimental)

Filterability of *Treponema pallidum*. (Ein Beitrag zur Filtrierbarkeit der *Spirochaeta pallida*.) SCHMIDT, K. (1955). *Zbl. Bakt., I. Abt. Orig.*, **162**, 280. 13 refs.

Immunological and Biological Studies of Rabbits Infected with Syphilis. (Das immunbiologische Verhalten luisch infizierter Kaninchen.) MÖBEST, H., and DONTENWILL, W. (1955). *Z. Hyg. InfektKr.*, **141**, 25. 10 figs, 26 refs.

GONORRHOEA

Serological Study of *Neisseria gonorrhoeae*. WILSON, J. F. (1954). *J. Path. Bact.*, **68**, 495. 23 refs.

The author, working at the Sunderland Royal Infirmary, has studied the antigenic structure of 28 "smooth" strains of *Neisseria gonorrhoeae*. Details of the serological tests used are given and the causes of the variability which was noted in the reactions are discussed. Under optimum conditions *N. gonorrhoeae* is usually "smooth" when isolated from acute infections. Some suspensions of "smooth" cultures, while not auto-agglutinable in 0.85 per cent. saline and not agglutinated by normal rabbit serum, may become hyperagglutinable and be agglutinated to an abnormally high titre by rabbit antisera containing agglutinins against the organism; however, both the agglutination reactions and also the power of these strains to absorb homologous antibodies are less specific than with normal strains. Some strains are inagglutinable by specific antisera on isolation, but become agglutinable after suitable subculture or after adjustment of the reaction of the suspension to pH 6 or boiling it for 30 minutes. "Smooth" strains become inagglutinable after mouse passage.

Having overcome these difficulties the author demonstrated the presence of eight antigens which are not destroyed by heating at 100°C. for 30 min. and are part of the protein fraction of the organisms. Four of these, designated A, B₁, B₂, and C, behave as group antigens, while the other four (D, E, F, and G) appear to be type-specific. Any strain may possess all the group antigens and one type-specific antigen. All the antigens may be lost on subculture, but providing A or B remain, the other antigens can be regained.

R. F. Jennison

Clinical Observations on the Prophylaxis of Ophthalmia Neonatorum. MANN, I. (1954). *Brit. J. Ophthalm.*, **38**, 734. 1 fig.

The author suggests that the time has come for a revaluation of the well-tried prophylactic measure, introduced by Crédé, of treating the eyes of newborn infants with silver nitrate solution. She therefore undertook a clinical experiment at the King Edward Memorial Maternity Hospital, Perth, Western Australia, where this has been the routine practice since the hospital was founded. In this area gonorrhoea is uncommon, but penicillin-resistant strains of staphylococci are prevalent. The trial was carried out on 1,148 infants who were divided into two groups of 569 and 579 respectively and observed for the first 12 days of life; in Group 1 the eyelids were cleansed at birth with normal saline solution, in Group 2 one drop of 1 per cent. solution of silver nitrate was instilled in addition.

Any "stickiness" about the eyes was recorded as discharge. This was noted in 100 cases in Group 1 (control group) and in 72 in Group 2; a higher proportion of these cases appeared within the first 4 days in Group 2 than in Group 1, but was also combined with a higher proportion of negative cultures. The author suggests that possibly at this stage the discharge without infection was attributable to the reaction to silver nitrate. Over the whole observation period potential pathogens were isolated from 17.5 per cent. of Group 1 and from 12.4 per cent. of Group 2, the organisms found being *Staphylococcus albus* (both haemolytic, and non-haemolytic), *Staph. aureus* (haemolytic, coagulase positive and negative), *Streptococcus viridans* (1 case), and *Bacterium coli* (1 case). There were four fairly severe cases of conjunctivitis in Group 1, but none in Group 2, although bacteriologically some of the infections in the latter were potentially worse and included eight cases of double infection. The fact that no serious infection actually developed in Group 2 may be considered evidence of local resistance in those treated with silver nitrate. In neither group was there any case of severe purulent ophthalmia, and all the infants were discharged from hospital with clean eyes.

Sensitivity to antibiotics and chemotherapeutic agents was tested in a certain number of cases. Streptomycin alone gave a universally positive result, no organism showing resistance to this antibiotic; aureomycin came next, followed by chloramphenicol; penicillin and sulphadiazine were apparently of little value. Clinically, the use of antibiotics is usually unnecessary, but streptomycin would be the antibiotic of choice. The majority of infections in both groups cleared up with frequent saline swabbing, clearance in Group 2 being achieved more quickly. The author concludes that the use of silver nitrate reduces the incidence of infection, as distinct from discharge, in the first 12 days of life, but that its use is unnecessary in an efficient hospital in a country where the incidence of gonorrhoea is low, but "should still be considered as desirable in primitive conditions among infected populations". V. Reade

Treatment of Chronic Gonorrhoea with Long-acting Penicillin. CAMBON, K. G., and CAMBON, E. N. (1955). *Canad. med. Ass. J.*, **72**, 221.

Symptomatology of Gonorrhoea in the Male. NØRGAARD, O. (1955). *Ugeskr. Laeg.*, **117**, 385. 8 refs.

Acute Gonococcal Peritonitis in Young Girls. (Péritonite aiguë gonococcique des petites filles.) PICARD, R. (1955). *Scapell*, **108**, 409.

NON-GONOCOCCAL URETHRITIS AND ALLIED CONDITIONS

Non-Gonorrhoeal Urethritis. IKEJANI, O. (1955). *W. Afr. med. J.*, **4**, 25. 1 ref.

Bacterial Flora of the Urethra in Non-Specific Urethritis. WILLCOX, R. R. (1955). *Canad. med. Ass. J.*, **72**, 220. 4 refs.

CHEMOTHERAPY

Intramuscular Chloramphenicol in Out-patient Treatment of Venereal Disease. WOOD, C. E., OLANSKY, S., and EDMUNDSON, W. F. (1954). *Arch. Derm. Syph. (Chicago)*, **70**, 625. 11 refs.

In a study of the suitability of chloramphenicol for the out-patient treatment of venereal diseases the authors gave intramuscular injections of 4 g. of the antibiotic suspended in saline or water at intervals of 2 or 3 days. Throughout the study no case of intolerance to the drug was noted. Results were as follows.

Of 24 cases of granuloma inguinale given a total dose of 12 to 16 g. of chloramphenicol, success was obtained in 23, the average healing time being 13 days. Of 36 cases of chancroid, one injection of 4 g. chloramphenicol was sufficient to clear the lesion in twenty, the remainder requiring 2 or 3 further doses before this was achieved. The average healing time in this series was 12.2 days. Of eighteen cases of lymphogranuloma venereum treated, seventeen were cured within 11 days after a total dose of 12 g. chloramphenicol had been given. Even better results were obtained, however, in fifteen additional cases of this disease given aureomycin. A total of 38 cases of non-gonococcal urethritis were also treated with chloramphenicol, but with less good results than in the other groups.

[The treatment described appears to be suitable for out-patient use in cases of lymphogranuloma venereum and granuloma inguinale, but to have no advantages over other methods in chancroid and non-gonococcal urethritis.]
Robert Lees

Tetracycline in Genitourinary Infections. SANFORD, J. P., FAVOUR, C. B., HARRISON, J. H., and MAO, F. H. (1954). *New Engl. J. Med.*, **251**, 810. 1 fig., 4 refs.

Early clinical trials have indicated that gastro-intestinal irritation occurs less frequently after administration of tetracycline than after administration of chlortetracycline or oxytetracycline. At the Peter Bent Brigham Hospital, Boston, the sensitivity *in vitro* of 200 strains of bacteria, recently isolated from patients with genito-urinary infection, to tetracycline was compared with that to the more commonly used antibiotics. The methods and materials employed are described in detail. On some of the patients controlled therapeutic trials were carried out to correlate sensitivity *in vitro* with clinical response. *Escherichia coli* and other Gram-negative bacteria were found to be sensitive to tetracycline, but *Aerobacter aerogenes* and organisms of the *Proteus* groups were not. It is concluded that tetracycline is a useful drug in the treatment of genito-urinary infections. K. H. Taylor

Prolonged Reaction to Intramuscular Benzathine Penicillin. ANDERSON, H. C. (1954). *Lancet*, **2**, 1157. 1 fig., 9 refs.

PUBLIC HEALTH AND SOCIAL ASPECTS

Present Problem in the Control of Venereal Diseases.

(El problema de actualidad en el control de las enfermedades venéreas.) CLARK, E. G. (1954). *Bol. Ofic. sanit. pan-amer.*, 37, 154.

The author points out that the present mood of extreme optimism following the success of venereal disease control programmes recalls the events which followed the first World War, when a similar optimism was accompanied by a relaxation of control measures and a rise in the incidence of venereal disease consequently occurred.

In the United States the incidence of primary and secondary syphilis has fallen precipitately, but this fact should be interpreted with caution because a decline in case-finding activity is always followed by a decline in the apparent incidence. Further, discovery of a case of early latent syphilis signifies that a case of primary or secondary syphilis has been missed, and three latent cases are now found for every one of primary or secondary syphilis. Moreover, the incidence of early syphilis has recently risen in nine States and eleven of the big cities, while the incidence of gonorrhoea in the U.S.A. is now higher than in any year before 1943, although below the peak reached in 1947, and gonorrhoea is the second commonest notifiable infectious disease. In the opinion of the leading American medical organizations concerned with the problem, the programme for venereal disease control should be intensified in the coming years, being directed towards identifying and overcoming the foci of most resistance, and giving more attention to latent syphilis and gonorrhoea. It is emphasized that the cost of control measures does not fall in proportion to the reduction in the number of cases for, as the incidence decreases, so the cost of localizing each case rises. Thus motives of false optimism or misguided economy should not be allowed to sacrifice a programme which has been, so far, brilliantly successful.

[This is a strong warning from an authoritative source.]

Eric Dunlop

Treponematoses from the Point of View of Public Health.

(Las treponematoses desde el punto de vista de la Sanidad pública). GUTHE, T. (1954). *Act. dermo-sifiliogr. (Madr.)*, 46, 77. 7 figs, 28 refs.

With the advent of antibiotics and recent progress in laboratory techniques the war against treponematoses has become increasingly effective, and in this paper the head of the Venereal Disease and Treponematoses section of the World Health Organization (W.H.O.) outlines the present position. Campaigns against venereal disease must be based upon active case-finding by systematic serological examination of population groups and the application of epidemiological principles. Laboratories undertaking serological examinations should be restricted in number and should be well equipped, performing standardized quantitative tests and exchanging sera for examination under the control of a central laboratory where treponemal immobilization and agglutination tests may be performed.

The incidence of syphilis has fallen in many countries since the end of the second world war, but there are still at least 20 millions of the world population suffering from syphilis, and incidence remains high in many regions, the figure ranging from 14 to 32.9 per cent. in parts of Africa, 0.6 to 31 per cent. in Afghanistan, 0.5 to 11.9 per cent. in Ceylon, 5 to 50 per cent. in India, 0.2 to 27 per cent. in Egypt, 4.2 to 82 per cent. in Ethiopia, and 12 to 15 per cent. in certain parts of South America. Endemic syphilis exists in Bosnia, Serbia, and many other foci, occurring as "bejel" among the Arab peoples, "njovera" in Southern Rhodesia, and as "dichucha" among the Bantus of Bechuanaland. Yaws, a disease of infancy and adolescence, affects at least 50 million persons, while pinta is a problem in Mexico and Colombia, where it affects 2 per cent. of the population although, unlike syphilis, yaws, and bejel, it does not produce physical disablement. The essential weapon in the antitreponemal campaign is a sufficiency of penicillin, world production of which exceeded 500 tons in 1953. Systematic treatment campaigns are required wherever there is endemic syphilis, and the part played by W.H.O. and other agencies of the United Nations in assisting such campaigns is described.

The economic importance of these diseases is emphasized; for instance, in Southern Rhodesia venereal disease causes the loss of 100,000 working days each year, while in the period 1949-50 the cost to the U.S.A. of psychosis and blindness due to syphilis was more than 150 million dollars. On the other hand, it is calculated that the national income of Haiti was increased by 5 million dollars a year as a result of a campaign against yaws.

Eric Dunlop

Private Physician in Venereal Disease Control. SMITH, C. A. (1955). *Sth. med. J. (Bgham, Ala.)*, 48, 169.

MISCELLANEOUS

Njovera. WILLCOX, R. R. (1955). *Centr. Afr. J. Med.*, 1, 30. 5 figs, 15 refs.

The condition known as "njovera", which occurs in the native population of certain areas of Southern Rhodesia, is considered to be a form of endemic syphilis comparable with bejel and other extravenereal treponematoses. Secondary manifestations—condylomata, mucous patches, laryngitis, and bone pains—are generally the first evidence of the disease, generalized eruptions being uncommon. The late lesions are generally of gummatous type, affecting commonly the palate and nasal septum (gangosa), skin, and bones, but the possibility of involvement of the cardiovascular and nervous systems is not ruled out. It is suggested that the gummatous stage may be the result of superinfection in sensitized individuals.

R. Crawford

On the Clinical and Pathological Aspects of Chronic Benign Plasma-cell Balanoposthitis. (Zur Klinik und Histologie der Balanoposthitis chronica circumscripta

benigna plasmacellularis-Zoon.) NÖDL, F. (1954). *Arch. Derm. Syph. (Berl.)*, **198**, 557. 4 figs, 14 refs.

Chronic benign circumscribed plasma-cell balanoposthitis was first described as a clinical entity by Zoon in 1952 (*Dermatologica (Basel)*, **105**, 1; *Abstracts of World Medicine*, 1953, 13, 52). References to it in the literature are infrequent and the author believes that it is often confused with the erythroplasia of Queyrat, but many cases are probably never seen medically. Biopsy and histological examination formerly provided the only certain method of diagnosis. He then describes a case, seen at the University Skin Clinic, Göttingen, of a 62-year-old man who had developed a red patch on the glans and inner side of the prepuce one year previously. The lesion was at first diagnosed as erythroplasia and x-ray treatment given, but later biopsy did not confirm the diagnosis. The author describes in great detail the clinical appearances of the lesion, and discusses the differential diagnosis from chemical dermatitis, balanitis xerotica obliterans, and balanitis due to syphilis, gonorrhoea, diphtheria, or fungi. Only the erythroplasia of Queyrat is considered to present differential diagnostic difficulties.

The histological picture found at biopsy is described and illustrated in photomicrographs. The most important characteristics were the deposit of quantities of haemosiderin which gave a positive Turnbull-blue reaction and a profound infiltration of the tissues with plasma cells, together with changes in the walls of the small blood vessels. The lesion improved under treat-

ment with tannin powder and boracic and zinc ointments. The author, differing from Zoon, claims that it is possible to differentiate this lesion on clinical grounds alone; he considers the essential pathological process to be a disturbance of the circulation and permeability of the local capillaries.

R. D. Catterall

In Vitro Sensitivity of *Hemophilus ducreyi* to Several Antibiotics. THAYER, J. D., FIELD, F. W., and PERRY, M. I. (1955). *Antibiot. and Chemother.*, **5**, 132. 5 refs.

Serum Proteins in Lymphogranuloma Venereum. GARROW, J. S. (1954). *W. Indian med. J.*, **3**, 161. 1 fig., 4 refs.

Lymphopathia Venereum in the South African Bantu Female. ULMAN, H. (1955). *S. Afr. med. J.*, **29**, 273. 2 figs, 15 refs.

International Action in the Fight against Treponematoses. (Azione internazionale nel campo della lotta contro le treponematosi.) GIROLAMI, M. (1954). *Arch. ital. Sci. med. trop.*, **35**, 549.

Incidence of Yaws in the New Hebrides. MILLS, A. R. (1955). *Trans. roy. Soc. trop. Med. Hyg.*, **49**, 58. 7 refs.

Recurrence of Experimental Yaws (Framboesial) Infection in the Hamster. HILL, K. R., and GORDON, C. C. (1954). *W. Indian med. J.*, **3**, 279. 8 figs, 2 refs.